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Coal – North America

Fading utility demand for thermal coal will increase reliance on exports, met coal

Demand for thermal coal from the US utilities will erode significantly in the 2020-30 decade, driving the ongoing contraction in the coal industry and increasing its reliance on exports. We expect that the longer-term trend will have the greatest impact on demand for coal from the Powder River Basin (PRB) in Wyoming and Montana, but will ripple across all coal basins and present a significant challenge for the coal industry.

The pace and magnitude of the decline in coal demand for power generation remains uncertain. But the closures of coal-fired power plants already announced, plus other likely closures such as power plants more than 50 years old, would reduce coal to as little as 11% of total US power generation by 2030. This drop would represent a substantial reduction from the today's mid-20% contribution to power generation, and the continuation of an ongoing secular decline in thermal coal demand (see our reports, "Natural gas gaining momentum as energy transition awareness moves into spotlight," June 26, 2019; and "Power Generation – US: FAQ on the economics of renewable energy, battery storage, and the future of coal generation," June 12, 2019). Coal had represented half of domestic power generation as recently as 2008.

We expect that new natural gas-fired generation, and to a much lesser extent renewable energy, will replace most of the thermal-coal electric-generation capacity heading into retirement. We do not expect an increase in the capacity factor of the coal-fired units that remain in service. This will result in a significant decline in the domestic demand for thermal coal.

Falling utility demand for thermal coal ultimately will have a significant impact on the domestic coal industry. While we have a stable outlook for the coal industry over the next 12-18 months, based largely on our expectations of strong cash margins on metallurgical (met) coal used in steelmaking, utility demand for thermal coal will still fall significantly over a longer horizon despite regulatory easing in recent years. Utilities consumed about 84% of the US coal industry's 756 million tons of production in 2018. The further destruction of a meaningful portion of utility demand would be too significant to replace just through greater participation in other markets, such as industrial or home-heating uses, or by increased exports, whose profitability depends on relatively high prices because of the high costs of delivering US-produced coal to distant markets.

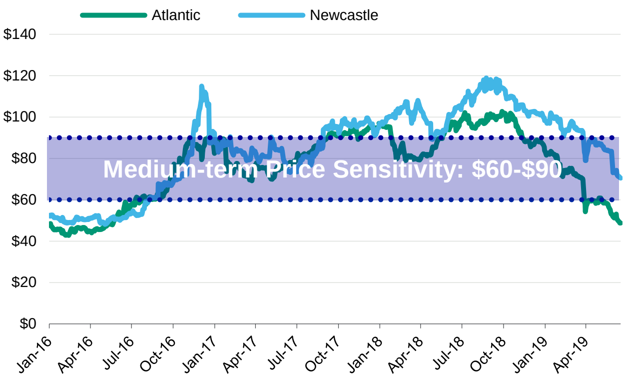
The PRB will be the hardest-hit major US coal basin as thermal coal declines. Profitability in the basin is under stress today, especially in the low-heat 8,400 BTU segment of the market, whose major producers have gone through bankruptcy in recent years. Peabody Energy (Ba3 stable) and Arch Coal (Ba3 stable) restructured their balance sheets under bankruptcy protection a few years ago and recently announced plans to combine their assets in the PRB to compete more effectively with natural gas and renewables. Cloud Peak is in bankruptcy protection today.

Other regions will also be hit hard, however. Central Appalachia's thermal coal market has declined markedly for more than a decade as low-cost natural gas exacerbated ongoing issues related to depletion and unfavorable geology, but the segment that remains, operated by such producers as Contura Energy (B2 stable), will be very hard-pressed to generate positive cash margins. The Northern Appalachia and Illinois Basin producing regions will fare better, especially the mines that have low cash costs or locations close to coal-fired power plants that will still be running.

We expect that the coal industry will become even more reliant on exports in the coming decade, though cash flow from coal exports will be volatile. Exports represented just 3%-7% of annual coal disposition between 2000-10, a proportion that increased to about 15% by 2018 as power-generation demand for thermal coal declined and export pricing improved. A meaningful and sustained increase in the volume of coal exported will be challenging, particularly with risks to the economics of coal-fired generation rising in Asia. More than one-quarter of US coal will likely be exported by the early-to-mid 2020s – assuming thermal and metallurgical export prices support reasonable net-backs for producers. Most met coal is exported today, and Alliance Resource Partners (Ba3 stable), CONSOL Energy (B1 stable), and Foresight Energy (B3 stable) already export more than one-quarter of their thermal coal today. While export volumes for thermal coal will fall in 2019, and weakening prices threaten a more significant decline in 2020, export volumes for met coal will remain strong and will continue to drive disproportionately high earnings and cash flows in the near term.

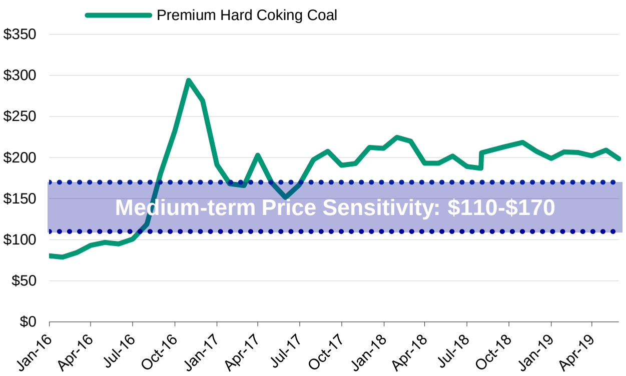
But the emphasis on exports will increase even more over the longer term, as domestic demand for thermal coal falls, though cash flow will be volatile and limit debt capacity. Most exporters of thermal and met coal do not have the cost structures to compete effectively through full price-cycles, as in the thermal export market in the second half of 2019. Lower-rated producers such as Foresight, Murray Energy (Caa1 stable) and Wolverine Fuels (Caa1 stable) could experience stress more quickly, particularly if they cannot address their debt levels and maturities. Individual producers' export logistics and their ability to develop sustainable demand for their coal in such growth regions as India will influence their credit quality as the export market evolves. Exports from US producers will remain a small portion of the global coal trade, with much higher export volumes from countries closer to growth markets like Australia, Russia, and Indonesia, and this will be an ongoing and increasingly significant challenge for domestic producers.

Exhibit 1
Newcastle thermal coal prices have declined into our range...
USD/metric ton



The medium-term sensitivity range applies to Newcastle thermal coal. API2 is shown for illustrative purposes only. Our price ranges, as well as the midpoint, represent baseline prices used to sensitize financial performance and evaluate risk when analyzing credit conditions of companies within the sector. We will periodically review, in light of changing global GDP and supply/demand expectations, these price sensitivities to better assess the resiliency of operating and financial performance of mining companies.
Source: FactSet, Moody's Investors Service

Exhibit 2
...while met coal prices have remained elevated.
Premium hard coking coal Jingtang, USD/metric ton



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Source: Metal Bulletin, Moody's Investors Service

We believe the coal producers' capital allocation reflects their uncertainty about the magnitude and pace of declining demand for thermal coal and the increasing focus on exports. Coal producers faced with ongoing secular decline in thermal coal demand are directing discretionary cash flow toward shareholder returns, and in a few cases considering expanding capacity in certain types of met coal.

Companies such as Conuma (B2 stable) and Warrior Met Coal (B2 stable) only produce met coal today. Other companies such as Arch, Peabody, and Contura produce a mix of met and thermal coal, and already generate significant percentages of their EBITDA and cash flow from met coal. Others that focus primarily on thermal coal are moving more significantly into the met coal market, including CONSOL, with its Itmann project, and Murray, which acquired two met coal mines from Mission Coal.

Still others, most notably Alliance, are investing in non-coal assets to diversify their exposure. But that strategy has proven more difficult than expected for Natural Resource Partners (B2 stable), which diversified away from coal but became overleveraged after a series of acquisitions. Natural Resource Partners has moved to reduce debt by selling some assets issuing new debt, using the proceeds of those efforts to pay off existing debt.

Appendix: Ratings and key metrics for North American coal producers

Exhibit 3

Rated coal companies in North America

Data as of March 31, 2019

Company	Rating	Outlook	Revenues (USD, millions)	EBITDA Margin	Debt/EBITDA
Alliance Resource Operating Partners, L.P.	Ba3	Stable	$2,072.3	33.5%	0.9x
Peabody Energy Corporation	Ba3	Stable	$5,369.7	26.9%	1.1x
Arch Coal, Inc.	Ba3	Stable	$2,431.7	18.5%	0.8x
CONSOL Energy Inc.	B1	Stable	$1,413.3	33.7%	2.0x
Conuma Coal Resources Limited* (Private)	B2	Stable	$621.0	n/a	n/a
Warrior Met Coal, Inc.	B2	Stable	$1,334.5	43.4%	0.6x
Contura Energy, Inc.	B2	Stable	$2,158.0	13.9%	2.7x
Natural Resource Partners L.P.	B2	Stable	$258.4	81.4%	2.9x
Foresight Energy, LLC	B3	Stable	$1,133.3	27.1%	4.1x
Murray Energy Corporation (Private)	Caa1	Stable	$3,700.0	n/a	n/a
Wolverine Fuels Holding, LLC (Private)	Caa1	Stable	$637.0	n/a	n/a

[1] * indicates data as of December 31, 2018 year-end.

[2] Companies marked (Private) are using data from credit opinions.

Source: Moody's Investors Service, Moody's Financial Metrics™

Moody's related publications

Sector In-depth reports:

» Cross-Sector – Global: Natural gas gaining momentum as energy transition awareness moves into spotlight, June 26, 2019

» Power generation – US: FAQ on the economics of renewable energy, battery storage and fossil-fuel power plants, June 12, 2019

» Weak business prospects in Powder River Basin will continue in 2019, April 11, 2019

» Oil and Gas – North America: Natural gas going global amid rising demand, nimble supply, carbon transition, March 21, 2019

» Pricing supports industry in 2019; secular decline remains medium-term risk, January 2019, January 31, 2019

Sector comments:

» Coal - US: High export prices drive buybacks over debt reduction and growth capital, November 26, 2018

» Coal - Global: Increasing price sensitivity ranges for seaborne metallurgical, thermal coal, October 8, 2018

Outlooks:

» Coal – North America: Thermal coal remains in secular decline, but met prices support stable outlook, May 31, 2019

» Base Metals - Global, Steel - US, Coal - US: 2019 outlooks stable on slowing growth (Slides), December 12, 2018

» Coal - North America: Met coal prices support stable outlook, but secular decline for thermal still looms, May 31, 2018

Rating methodology:

» Mining, September 2018

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